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(54) TITLE: **METHOD OF INFORMING OF NEIGHBORING ACQUAINTANCE  
BY USING MOBILE PHONE**

15 **ABSTRACT**

Disclosed is a method for informing of a neighboring acquaintance by using a mobile phone. In the conventional method of finding an acquaintance, there has been a problem 20 in that the use of the service is not easy because a user has to request position-open through connection to a service system of a relevant telecommunications company, and select a group which he/she informs of his/her position, whenever the user wants to open position 25 information. The disclosed method includes the steps of:

approving mutual position information sharing through a mobile phone by a user having his/her own group and an acquaintance of the user; appointing groups by adding acquaintance information to a user group, adding user 5 information to an acquaintance group, and then storing the groups in a group database; scanning, by a telecommunications control station system, for a neighboring acquaintance by determining whether a group member and a group user of each group stored in the group 10 database are positioned within a predetermined distance or not in; and informing, by the telecommunications control station system, of the neighboring acquaintance by transferring a message indicating that the acquaintance and the user are adjacent to each other, to the acquaintance, 15 while transferring a message indicating that a group user and a specific acquaintance are adjacent to each other, to the group user, when there is the neighboring acquaintance within the predetermined distance. Therefore, the user can register position information sharing with a counterpart by 20 simply operating only a mobile phone without a complicated registration process, and can temporarily discontinue the position information sharing, so that convenience of use can be improved due to the easiness of the operation.

**REPRESENTATIVE DRAWING**

FIG. 4

**SPECIFICATION**

5

**BRIEF DESCRIPTION OF THE DRAWINGS**

10 FIG. 1 is a block diagram illustrating a method for finding a friend by using a position opening function according to a conventional patent application technology.

FIG. 2 illustrates a configuration of a friend finding system according to a conventional application technology.

FIG. 3 is a block diagram illustrating a system for implementing the present invention.

15 FIG. 4 is a flow diagram illustrating a method for informing of a neighboring acquaintance by using a mobile phone according to the present invention.

FIG. 5 illustrates a group database according to a first embodiment of the present invention.

20 \*\* Reference numerals of several elements in drawings \*\*

310: telecommunications control station system

320: group database

330: position tracking system

340, 350: base station

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## **DETAILED DESCRIPTION OF THE INVENTION**

### **OBJECT OF THE INVENTION**

### **FIELD OF THE INVENTION AND PRIOR ART IN THE FIELD**

5        The present invention relates to a method for informing of a neighboring acquaintance by using a mobile phone, and more particularly to a method for informing of a neighboring acquaintance by using a mobile phone, in which, when users whose position tracking is mutually accepted are  
10      within a predetermined distance, such position information is sent to respective users, thereby facilitating meetings between users who do not have predetermined appointments.

Recently, a position tracking service for an acquaintance by a mobile phone has been provided. However, 15 such a conventional method is performed only when a user requests position tracking for a specific acquaintance, and the tracking range is not limited.

Such a position tracking service has a problem in that personal privacy may be violated.

20        Also, there were patent applications regarding a technology of mutually informing of positions of respective registered users, which include Korea Patent Laid-Open Publication No. 2002-0015754, entitled "a method for finding a friend by using wire/wireless communication."

25        Hereinafter, a friend finding method according to the

'Korea Patent Laid-Open Publication No. 2002-0015754 a method for finding a friend by using wire/wireless communication (hereinafter referred to as a conventional patent application technology)' will be described in 5 detail.

FIG. 1 is a block diagram illustrating a method for finding a friend by using a position opening function according to a conventional patent application technology; and FIG. 2 illustrates a configuration of a friend finding 10 system according to a conventional application technology.

A conventional patent application technology includes the steps of building a database S10, posting a website S20, authenticating a user S30, checking a position S40, standing by S50, opening position information S60, 15 transferring position information S70, receiving position information S80, and ending S90.

The step of building a database S10 includes the steps of building user information S11, building group information S12, and building position information S13.

20 The step of building user information S11 includes the step of storing personal details including a phone number of a friend-finding service user, an identification symbol for the user, which is defined by the user and a service system 30 providing the service, and interests (such as 25 hobbies) of the user.

The step of building group information S12 includes the step of storing the name of a group already opened in the friend-finding service, activities, information on members, and information on a group to be newly opened.

5 The step of building position information S13 includes the step of storing a position of a user, who is connected to the friend-finding service and is opening his/her position, the type of a client system checking user position information set at the step of opening position  
10 information S60, the name of a group, the name of a specific member, etc.

The step of posting a website S20 includes the steps of posting an authentication program S21, posting group information S22, posting a group creation program S23, and  
15 posting a position information program S24.

At the step of posting an authentication program S21, a program is made and posted on a website of a service system, in which the program is for receiving a user identification symbol transferred via a client system 10 of  
20 a user while transferring/receiving data to/from a user information database 40, checking whether the user is registered or not based on the user information database 40, and giving the registered user right to use service.

At the step of posting group information S22, detailed  
25 information of a group already opened/run in the service

system, such as a group name, activities, characteristics, the number of members, member names, etc., is posted on the website.

Also, at the step of posting group creation program 5 S23, a new-group creation program, which is required for creating a new group not opened in the service system, is posted on the website.

In the group creation program, it is preferable that information, such as the name of a group, the purpose of 10 activities, and member names, etc. is input.

And at the step of posting a position information program S24, two programs are posted on the website: one is a program for receiving position information from a telecommunications company by using a mobile phone, the 15 position information being detected by the telecommunications company, and storing it in the service system; and the other is an input program with which a user can directly input his/her position.

The step of authenticating a user S30 includes the 20 steps of registration S31, receiving identification information S32, searching for identification information S33, and authenticating identification information S34.

At the step of registration S31, a user, who is connected to the website for the first time in order to use 25 the friend-finding service provided by the service system,

is required to input interests (such as personal details, hobbies, etc.) and user-information (such as a mobile phone number), and to select a group which the user wants to join, and then such user-information is stored in the user 5 information database 40.

At the step of receiving identification information S32, the user identification symbol predetermined between the registered user and the service system 30 is transferred to the service system through user-operation of 10 the client system 10, and the transferred user identification information is received by the service system 30.

At the step of searching for identification information S33, it is checked whether a user is registered 15 on the service or not by searching for the transferred user identification information from the user information database 40 transferring/receiving data to/from the service system 30.

At the step of authenticating identification 20 information S34, the right to use the service is given to the authenticated user based on the search result of the database 40, and changed information, for example, whether news on the group the user belongs to is released or not, is provided to the user.

25 The step of authenticating a user S30 is applied to

when a user is connected to the service system by using a computer, as well as when a user is connected to the service system 30 by using a mobile phone.

The step of checking a position S40 includes the steps 5 of detecting a position S41 by a telecommunications company, transferring a position S42 by a telecommunications company, receiving a position S43 by a service system, inputting a detailed position S44, and receiving a detailed position S45 by a service system.

10 At the step of detecting a position S41 by a telecommunications company, a position of a user connected to the service via a mobile phone is detected by using a base station or adding a position tracking function to a terminal.

15 Here, when the telecommunications company uses a GPS (Global Position System), it is possible to obtain more detailed user position information.

At the step of transferring a position S42 by a telecommunications company, the user position information 20 detected at the step of detecting a position S41 is transferred to the service system 30 by using a repeater of the telecommunications company.

At the step of receiving a position S43 by a service system, the transferred user position information is 25 received by the service system 30 and stored in a position

information database.

At the step of inputting a detailed position S44, a user directly inputs his/her position because the telecommunications company cannot detect detailed position 5 information, and also a user directly inputs his/her detailed position when using the service through a computer instead of a mobile phone.

At the step of receiving a detailed position S45 by a service system, the detailed position information directly 10 input by the user is received by the service system 30 and stored in the position information database.

At the step of standing by S50, when position information of members belonging to a common group, from among users of the service, is opened, the opened position 15 information is immediately received.

Here, when the user who has requested stand-by mode does not want to open his/her position, the user disconnects from the service and waits for position information to be opened.

20 The step of opening position information S60 includes the steps of checking a stand-by list S61, determining to open S62, and setting members S63.

At the step of checking a stand-by list S61, the authenticated user checks the number of group-members on 25 the stand-by list before selecting 'position open.'

At the step of determining to open S62, a user connected to the service system determines to open his/her position, and then, when the user wants to open the position, the user selects 'open.'

5 At the step of setting members S63, when the user has selected 'open', the user can set groups or specific members to whom his/her position information is opened, or can set the type of a client system by which his/her position information is checked.

10 In other words, it is possible to set the type of a client system for checking position information, as a mobile phone, a computer, or both client systems.

The position-open user gets on a position-open stand-by list capable of receiving opened position information of 15 other group-members, in stand-by mode without any additional processes after opening position information.

At the step of transferring position information S70, detailed information (such as a name, a mobile phone number, a current position, etc.) and messages of a 20 position-open user are transferred from the service system 30 to a client system of a stand-by user via a communication network.

Also, when searching for a specific person, a user of the service can search for the person by entering a name or 25 a mobile phone number of the specific person.

When a name or a mobile phone number of the specific person is entered, the service system 30 searches the position information database for whether the specific person has opened his/her position information or not by 5 using the entered information.

When the specific person has opened his/her position, the position information/ messages searched from the position information database are transferred to a client system of a user who has requested the search.

10 At the step of receiving position information S80, position information of friends/group-members transferred from the service system is received by a mobile phone or a computer of a user via a communication network, in the form of a short/voice message or an image/video, so that the 15 user can check the transferred position information.

A stand-by user and a position-open stand-by user, who have received the transferred position information, can move to a location informed by a position-open user, and can meet group-friends.

20 At the step of ending S90, when a user who has requested stand-by mode wants to cancel the stand-by mode, the user connects to the service system and exists the stand-by mode by selecting 'end of stand-by mode', and also, when a user who has opened his/her position wants to 25 exit position-open mode after achieving a certain purpose,

the user can exit the mode by deleting existing position information and stopping stand-by mode through connection to the service system.

A system for implementing a friend finding method by 5 using a position opening function includes a client system 10 of a position-open user, a communication network 20, a service system 30, a database 40, and a client system 50 of a stand-by user.

The position-open user 10 is a user opening his/her 10 position, and includes a mobile phone 10 with a built-in web-browser capable of wireless internet connection, or a computer capable of internet connection.

The communication network 20 is for internet connection by connecting to the client system 10 of the 15 position-open user, and uses a communication network to which both the client system 10 and the service system 30 can be simultaneously connected.

The service system 30 configures a program in such a manner that when there is a stand-by user, position 20 information of a position-open user on the position information database is transferred to the client system 50 of a stand-by user, and data is transferred /received to/from the user information database 40.

The database 40 is recorded in a certain storing 25 medium of the service system 30, and transfers/receives

data to/from the service system 30 while providing stored information according to the operation of the service system 30.

The stand-by user 50 is a user who has connected to 5 the service system 30 and has requested stand-by mode, and includes a mobile phone or a computer for receiving opened position information.

Hereinafter, a process for a method of finding a friend by using a mobile-phone position detecting function 10 according to a conventional patent application technology configured as described above will be described.

A carrier for providing friend finding service by using wire/wireless communication stores user information, such as personal details including a personal mobile phone 15 number, and group information, such as the name of an opened group, activities, etc., in the database 40.

The service system 30 in which the database 40 is built posts a website for posting the friend finding service through connection to the user-connection 20 communication network 20.

Here, the website posts a user authentication program for transferring/receiving data to/from the user information database 40 in such a manner that a connected user enters a user identification symbol, and the entered 25 symbol is transferred to the service system 30 so that the

user can be authenticated.

Also, on the website, group information and a group creation program are posted, the group information including names of opened groups, activities, 5 characteristics, etc., and the group creation program being for creating a new group by inputting the name, activities, etc. of the group to be created if a user wants to create the new group.

The service system 30 requires user authentication of 10 the client system 10 connected to the posted website, and the user, for the user authentication requirement, enters a user identification symbol predetermined by the service system 30, and transfers the symbol to the service system 30.

15 The service system 30 which has received the user identification symbol determines whether the user is registered or not by searching the user information database 40.

For detecting a position of the authenticated user, 20 when the user is connected to the service system 30 by using a mobile phone 10, user position information obtained by a telecommunications company is transferred to the service system 30, and on the other hand, when the user is connected to the service system 30 by using a computer, the 25 user directly inputs his/her detailed position and

transfers the position information to the service system 30.

Also, a user connected to the service system 30 by using a mobile phone 10 can directly input his/her detailed 5 position.

The transferred user position information is temporarily stored in the service system 30, and a user checks the number of stand-by group-members, and selects 'stand-by' or 'position open.'

10 When the user selects 'stand-by', the user stays in stand-by mode, and then, when group-members open position information, the service system 30 transfers the position information to a client system (such as, a mobile phone, a computer, etc.) of the stand-by user.

15 Also, when the user selects 'position open', the transferred position information is stored in a position information database and opened, and herein, the user can select a specific group/ person to whom he/she wants to open his/her position information.

20 Also, the user can set a client system of a connected user to whom he/she wants to inform of his/her position information in such a manner that his/her position information is opened to members connected by only a mobile phone, only a computer, or all client systems.

25 The user becomes a position-open stand-by user of

stand-by mode without any additional processes after opening his/her position, and when other group-members open their positions, the service system 30 transfers the position information to a client system (such as, a mobile 5 phone or a computer) of the position-open stand-by user.

Also, when the user enters a specific group name or a specific member name / phone number, the service system 30 checks whether a position of the requested group/person is opened or not by searching the position information 10 database.

When the position of the specific person is opened, the service system transfers the opened position information to the client system of the user.

Also, the user can check the position information, 15 which is in the form of a short/voice message or an image/video on the mobile phone of the user, received from the service system.

When the stand-by user / the position-open stand-by user exits the stand-by mode by connecting to the service 20 system, opened position information after the exit will not be transferred to a client system.

Also, when the user exits position-open mode by connecting to the service system after achieving a certain purpose of position open, position information is no longer 25 opened.

Hereinafter, an embodiment according to the conventional patent application technology as described above will be described in detail.

First, a first user connects to a carrier providing  
5 friend-finding service by using a mobile phone.

The first user requires the service system 30 to authenticate the website, and enters a user identification symbol.

10 The service system 30 checks whether the first user is registered or not by searching data in a user information database 40, and transfers the result to the first user.

A telecommunications company detects the position of the first user authenticated in the service system 30 by using a mobile phone 10 of the first user.

15 The first user position detected by the telecommunications company is transferred to the service system 30 via a repeater of the company, and the transferred first user position information is temporarily stored in the service system 30.

20 The first user selects 'stand-by', disconnects from the service system 30, and stays in stand-by mode.

In the same manner, a second user, who is a member of the same group as the first user, is also connected to the service system and is authenticated as a user, by using a  
25 mobile phone 10.

The second user checks the number of stand-by group-members and selects 'position-open.'

Here, the second user becomes a position-open stand-by user of stand-by mode without any additional processes 5 after opening a position.

The second user selects 'position-open' and the name of a group to whom he/she wants to open his/her position information, and sets the position information to be checked by members only connected through mobile phones.

10 The opened position information of the second user is stored in a position information database, and the service system transfers the second user position information in the form of a short/voice message or an image/video to mobile phones of stand-by users including the first user or 15 position-open stand-by users (other members).

#### TECHNICAL OBJECTS TO BE ACHIEVED BY THE INVENTION

However, in the conventional patent applicant 20 technology as described above, there has been a problem in that the use of the service is not easy because a user has to request position-open through connection to a service system of a relevant telecommunications company, and select a group to whom he/she wants to inform of his/her position, 25 whenever the user wants to open position information.

Also, there has been another problem in that the preparation and operation of the service is not easy because the service is not performed with only a mobile phone, and thus a website in which user information is 5 entered is required, and software for creation, joining, and authentication of groups has to be developed.

Also, there has been another problem in that privacy of each member may be violated because position information of members is displayed no matter where the members are, 10 and thus position information of members on positions where the members cannot directly meet with each other is detected.

Accordingly, the present invention has been made to solve the above-mentioned problems occurring in the prior 15 art, and an object of the present invention is to provide a method for informing of a neighboring acquaintance by using a mobile phone, in which a user can register in a position information service by simple operation through only a mobile phone, and can configure service environment.

20 Also, another object of the present invention is to provide a method for informing of a neighboring acquaintance by using a mobile phone, in which position information is transferred only when users, who have approved mutual position information exchange, are mutually 25 positioned within a predetermined distance, thereby

preventing privacy violation.

#### CONSTRUCTION AND FUNCTION OF THE INVENTION

5        In the present invention in order to accomplish this object, when users, who have approved mutual position information sharing, are mutually positioned within a predetermined distance, mutual position information is transferred to only the neighboring users.

10        Also, in the present invention, position information on users who have approved mutual position information sharing is easily transferred by using only a mobile phone without using any other service, such as service provided by an internet carrier.

15        Hereinafter, a preferred embodiment of the present invention will be described in more detail with reference to the accompanying drawings.

FIG. 3 is a block diagram illustrating a system for implementing a method for informing of a neighboring acquaintance by using a mobile phone according to the present invention, and includes telecommunications base stations 340 and 350, telecommunications control station system 310, and a group database 320. The telecommunications base stations 340 and 350 enable users 25 A, B, C and D within respective communication ranges to use

mobile phones, and transfer position information messages of other users to the mobile phones of the users A, B, C and D; the telecommunications control station system 310 receives position information exchange requests transferred 5 via the telecommunications base stations 340 and 350, notifies a counterpart of the request, and appoints the users to one common group when the requests are accepted; and the group database 320 stores a user list of each group set by the telecommunications control station system 310. 10 Also, the system, if necessary, may include a position tracking system 330 for tracking mobile phone positions of respective users A, B, C and D.

FIG. 4 is a flow diagram illustrating a method for informing of a neighboring acquaintance by using a mobile 15 phone according to the present invention. In step S401, a specific user requests position information sharing by selecting a counterpart; in step S402, a telecommunications control station system 310, which has received the user request, transfers a message to the selected counterpart, 20 thereby informing that the user has requested position information sharing, and asks a question if the selected counterpart accepts the request; in step S403, it is determined whether the counterpart accepted the position information sharing or not; in step S404, when the 25 counterpart does not accept the request, the rejection is

notified to the user and the process ends; in step S405, when the counterpart accepts the request, the acceptance is notified to the user, and then the user and the counterpart are registered for a counterpart group and a user group,  
5 respectively; in step S406, the user group and the counterpart group are stored in a group database 320; in step S407, positions of group-members are periodically detected from every group stored in the group database 320; in step S408, according to the result of the detection, it  
10 is determined whether members of the user group are neighboring with the user within a predetermined distance or not, and when there is no neighboring member, the process goes back to step S407; in step S409, when there is a neighboring member according to the determination, it is  
15 determined that a mobile phone of the neighboring member is in position information sharing mode or not, and when the mobile phone is not in position information sharing mode, the process goes back to step S407; and in step S410, when the neighboring member is in position information sharing  
20 mode according to the determination, positions of the position information sharing neighboring member and the group host (that is, the user) are opened to each other and the process ends.

Hereinafter, the present invention will be described  
25 in more detail.

First, in step S401, a user requests position information sharing by selecting a counterpart.

In other words, a user A connects to a telecommunications control station system 310 via a base station 340 by using his/her mobile phone, enters a phone number of a user B into the mobile phone, and emits it, thereby requesting mutual position information sharing with the user B to the telecommunications control station system 310.

In this manner, the user A can request position information sharing with a user C and a user D.

The user A selects a counterpart for position information sharing from a telephone number list stored in his/her mobile phone, and transfers the information to the telecommunications control station system 310, thereby requesting position information sharing. When requesting position information sharing with a counterpart not listed on the telephone number list, the user A can set a name and a phone number of the counterpart to be automatically stored in the telephone number list of a mobile phone.

Next, in step S402, the telecommunications control station system 310, which has received the user request, transfers a message to the selected counterpart, thereby informing that the user has requested position information sharing.

In other words, a message including a phone number or/and a name of the user A is transferred to a mobile phone of a user B.

The message may include information on function keys 5 for acceptance and rejection, and other processes for acceptance and rejection.

In step S403, it is determined whether the counterpart accepted position information sharing or not.

The acceptance /rejection is determined by checking 10 that a user B entered designated keys in step S403 or not, and it may be considered that the request is rejected when the keys are not entered for a certain time. Also other processes besides the above mentioned process can be used to determine the acceptance/rejection.

15 In step S404, when the request is rejected according to the result of determination in step S403, the rejection of the user B on position information sharing request is notified to the user A.

In step S405, when the request is accepted according 20 to the result of determination in step S403, the user B is included in the user A group, and the user A is included in the user B group.

In step S406, groups of the user A and the user B are stored in a group database 320.

25 The group database 320 includes groups of users

registered in a telecommunications control station system, and each user group includes phone numbers and names of group members who have accepted position information sharing with the relevant user.

5 The above mentioned example is shown in FIG. 5.

FIG. 5 is a first embodiment illustrating the state of each group stored in a group database. As shown in FIG. 5, a user A group includes users B, C, and D, a user B group includes a user A only, a user C group includes users A and 10 D, and a user D group includes users A and C.

In other words, the users A, C and D are acquaintances of each other, and the user B is A's acquaintance who knows the user A only.

After the configuration is completed, in step S407, a 15 telecommunications control station system 310 periodically searches for whether a group user and group members of each group are within a predetermined distance to each other or not.

Here, the predetermined distance is a communication 20 range of base stations 340 and 350, and group users within the common communication range are detected.

In step S408, according to the result of the detection, it is determined whether members of a common group are adjacent to each other within a predetermined 25 distance or not.

When there is no neighboring member according to the result of determination, the process goes back to step S407, and the detection process is periodically performed.

In step S409, when there is a neighboring group member 5 according to the result of determination of step S408, it is determined whether every neighboring group member is in position information sharing mode or not, and when all the members are not in position information sharing mode, the process goes back to step S407.

10 Each user can set position information to be secret by using his/her mobile phone, and the telecommunications control station system 310, which has received the set information, operates in such a manner that a user position of secret-set position information is not opened.

15 Setting of secret position information as described above can be performed on each/all member(s) of a group. Herein, a list of secret position information can be set to be displayed on a phone number list stored in the mobile phone.

20 In other words, position information sharing settings can be also displayed on a mobile phone number list displaying phone numbers/ names, so that a user can easily check to whom his/her position information is open/closed.

25 In step S410, when a mobile phone of the neighboring group member of a specific user group is in position

information sharing mode according to the result of determination of step S409, a message informing that the group member and the group user are closely positioned is notified to the group member and the group user,  
5 respectively.

As shown in FIGs. 3 and 5, in a user A group, users B, C, and D are registered as group members; in a user B group, a user A is registered; a user C group, users A and D are registered; and in a user D group, users A and C are registered. Both users A and B are positioned within a range covered by a base station 340; the user C is within a range covered by both base stations 340 and 350; and the user D is within a range covered by a base station 350. Hereinafter, a method for providing service according to 10 the present invention will be described in detail.

First, a telecommunications control station system 310 periodically detects positions of a group user and group members from each group.

In this manner, through the process of detecting a 20 user A group, users B and C, members of the user A group, are detected within a common communication range of a base station 340.

Here, it is checked whether position information sharing modes of the users A, B, and C are secret or not, 25 and then, when all the modes are not secret according to

the result, a message indicating that users B and C are adjacent to the user A is transferred to a mobile phone of the user A, and a message indicating that the user A is adjacent to the user B, and a message indicating that the 5 user A is adjacent to the user C are transferred to mobile phones of the users B and C, respectively.

When the user B is in a secret position information sharing mode, a message indicating that the user A is adjacent to the user C is transferred to mobile phones of 10 the users A and C.

In this manner, when group members B and C of a user A group are adjacent to the user A (that is, the host), a message indicating that there are neighboring acquaintances is notified to each of the users A, B and C, and then, the 15 users A, B, C can easily meet adjacent acquaintances by calling each other.

Also, when a user C group is detected in the position detecting process of the groups, position information of users A and D, that is, members of the user C group, is 20 transferred to the user C, and herein, position information of the users A and D is not transferred to each other because the users A and D are within ranges of different base stations 340 and 350, respectively.

As described above, according to the present 25 invention, information of an adjacent acquaintance is

automatically transferred to a user when the registered acquaintance is adjacent to the user, additional operations (such as special registration, setting, position open, etc.) are not required, and thus convenience of use is  
5 improved.

In FIG. 3, because a communication range of a base station is set as an adjacent range, the position tracking system 330 is illustrated so as to obtain more detailed distance information which cannot be detected by the base  
10 station.

In this manner, when the position tracking system 330 is used, position information on a user and members of the user group can be informed as specific numerical values, such as within 300m, 200m, etc.

15

#### EFFECTS OF THE INVENTION

As described above, in a method for informing of a neighboring acquaintance by using a mobile phone according  
20 to the present invention, information on an acquaintance positioned within a certain distance is automatically notified to a user without conventionally used additional operations, such as use of an internet site, and installation of a special program, so that a system can be  
25 easily constructed, used, and modified.

Also, a user can register position information sharing with a counterpart by simply operating only a mobile phone without a complicated registration process, and can temporarily discontinue the position information sharing, 5 so that convenience of use can be improved due to the easiness of the operation.

Also, in the present invention, position information between acquaintances within only a predetermined distance is shared, so that users sharing position information can 10 easily meet each other, and at the same time, position information of users positioned at a long distance is not shared, thereby preventing the disclosure of personal privacy.

15 **(57) WHAT IS CLAIMED IS:**

1. A method for informing of a neighboring acquaintance by using a mobile phone, the method comprising the steps of:

20 approving mutual position information sharing through a mobile phone by a user having his/her own group and an acquaintance of the user;

appointing groups by adding acquaintance information to a user group, adding user information to an acquaintance 25 group, and then storing the groups in a group database;

scanning, by a telecommunications control station system, for a neighboring acquaintance by determining whether a group member and a group user of each group stored in the group database are positioned within a 5 predetermined distance or not in; and

informing, by the telecommunications control station system, of the neighboring acquaintance by transferring a message indicating that the acquaintance and the user are adjacent to each other, to the acquaintance, while 10 transferring a message indicating that a group user and a specific acquaintance are adjacent to each other, to the group user, when there is the neighboring acquaintance within the predetermined distance.

15 2. The method as claimed in claim 1, wherein the step of approving position information sharing comprises the steps of:

requesting, by the user or the acquaintance, position information sharing, by connecting to the 20 telecommunications control station system through a mobile phone, and then entering and transferring a phone number of a counterpart; and

approving, by the telecommunications control station system, by transferring a message indicating that the user 25 or the acquaintance has requested position information

sharing, to a mobile phone of the counterpart, and checking acceptance/rejection of the counterpart.

3. The method as claimed in claim 1, wherein a  
5 range within the predetermined distance used at the step of scanning for the neighboring acquaintance comprises a communication range covered by each base station, or is within a distance measuring range which a position tracking system can determine.

10

4. The method as claimed in claim 1, wherein, in the step of informing of the neighboring acquaintance, when the neighboring acquaintance or the user temporarily discontinues position information sharing, a message  
15 indicating position information is not transferred to both the acquaintance and the user.

5. The method as claimed in claim 4, wherein the temporary discontinuation of position information sharing  
20 is set when the user or/and the acquaintance transfers a certain signal to the telecommunications control station system by using function keys of his/her mobile phone.

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DRAWING

FIG. 1

- 5 S10: building database
- S20: posting website
- S30: authenticating user
- S40: checking position
- S50: standing by
- 10 S60: opening position
- S70: transferring position information
- S80: receiving position information
- S90: ending

15 FIG. 3

- 310: telecommunications control station system
- 320: group database
- 330: position tracking system
- 340: telecommunications base station
- 20 350: telecommunications base station

FIG. 4

시작: start

- S401: user requests position information sharing by
- 25 selecting counterpart

S402: telecommunications control station system checks acceptance/rejection of counterpart

S403: counterpart accepted position information sharing?

S404: notify rejection to user

5 S405: notify acceptance to user and include counterpart in user group

S406: store appointed group in group database

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S407: periodically scan group member/user of appointed group

10 S408: group member/user within predetermined distance?

S409: group member/user sharing position information?

S410: transfer message indicating neighboring acquaintance to group member/user

종료: end